



## **North Dakota Department of Health**

# **AIR QUALITY ISSUES IN NORTH DAKOTA**

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The Clean Air Act, a federal law designed to improve air quality, limits the amount of pollutants in the air anywhere in the United States. This ensures that all Americans have the same basic health and environmental protections. The law allows individual states to have stricter pollution control requirements, but states are not allowed to have weaker requirements than those set for the whole country.

Although the Clean Air Act is a federal law, the states do much of the work to enforce the law. It makes sense for states to take the lead because pollution control problems often require special understanding of local industries, geography, weather patterns, etc. Since the original Clean Air Act was passed in 1970, the United States has made impressive strides in improving and protecting air quality.

### **Sources of Emissions**

Sources of pollutants are grouped into two categories: mobile sources and stationary sources. Nationally, more than one-half of total air pollution comes from mobile sources like cars and trucks. In North Dakota, the percentage is less because we have fewer cars. Stationary sources generate air pollutants mainly by burning fuel for energy and as byproducts of industrial processes.

### **Regulation of Industry**

The North Dakota Department of Health (NDDoH) takes the following steps to regulate industry:

1. Reviewing pollution control techniques
2. Conducting dispersion modeling assessments to predict the impact of emissions
3. Issuing construction and operating permits for industrial sources
4. Inspecting sources to ensure that operations are in compliance with the regulations
5. Requiring many large sources to install continuous emission monitors that constantly record the amount of specific pollutants exiting the stack
6. Responding to citizen complaints regarding emissions from the sources
7. Operating an ambient air quality monitoring network that collects samples to determine the level of pollutants in the air

8. Initiating enforcement actions when necessary to correct violations of air pollution control requirements

### **Results of Ambient Monitoring**

Monitoring levels of air pollution at various locations throughout the state consistently shows compliance with all national and state air quality standards. North Dakota is one of only a handful of states that meet these standards.

### **Pollution Control at Electrical Generating Stations**

All of the electrical generating stations in North Dakota have some level of pollution control. For example, all of the plants control particulate emissions, some operate burners designed to limit nitrogen oxide emissions, and some have sulfur dioxide scrubbers. As the plants began operation, each was subject to regulations that became increasingly more stringent over time. While all of our plants have some level of pollution control, a new plant would be required to install the best available control technologies at the time it is built and would be considerably cleaner than any of the existing plants. Any new power plant built in North Dakota will be subject to stringent emission limitations as part of its permitting process. Depending on a number of factors, the emissions from the new plant may be offset by reductions at an existing plant. In all cases, air quality standards must be met.

### **Prevention of Significant Deterioration (PSD)**

Two broad issues exist concerning clean air regulations:

- The first issue requires that ambient air quality standards be met. As previously discussed, the ambient air quality in North Dakota is excellent.
- The second issue relates to preventing air quality from getting significantly worse than it was at the “baseline” date. This regulation is referred to as Prevention of Significant Deterioration (PSD). The PSD Program requires sources to use Best Available Control Technology (BACT), limits increases in ambient concentrations of air contaminants, and protects air quality values such as visibility, plant and animal life and soils.
- The Department strongly supports the concept of maintaining our clean air and is working hard toward that goal. The Department uses a variety of methods to meet that goal including the use of computer dispersion modeling to predict pollution levels followed by a rigorous permitting/inspection program to ensure compliance with permitted emission rates. In addition, the Department operates a state-wide ambient monitoring network to measure actual pollutant concentrations to ensure compliance with air quality standards.

## **Future Considerations**

Unlike many other states struggling to clean up the quality of their air, North Dakota is unique – our air is already clean. Our challenge is to keep it that way and to make improvements where possible.

Future federal regulations (regional haze, multi-pollutant legislation, etc.) will further reduce emissions at existing facilities. Implementation of these regulations will require additional permitting, monitoring, and oversight.

In the meantime, ambient air quality monitoring continues to show exceptionally clean air in North Dakota.